

CLAIMS

What is claimed is:

1. A wireless device having both cellular capability and 802.1x capability, the wireless device comprising:
 - a signal strength detection circuit configured to detect when a strength of an 802.1x signal transmitted by an access point of an 802.1x network drops below a certain level and when a strength of a cellular signal transmitted by a cellular network is above a certain level; and
 - a handoff initiation circuit configured to initiate a handoff of a call from the 802.1x network to the cellular network.
2. The wireless device of claim 1, wherein the handoff initiation circuit initiates the call handoff upon receiving an indication from the signal strength detection circuit.
3. The wireless device of claim 1, wherein the handoff initiation circuit initiates the call handoff upon determining that a handoff selector has been activated by a user of the wireless device.
4. The wireless device of claim 1, wherein the signal strength detection circuit is configured to detect when a strength of a cellular signal transmitted by a cellular network drops below a certain level and when a strength of an 802.1x signal transmitted by an 802.1x network is above a certain level, and wherein the handoff initiation circuit initiates a call handoff from the cellular network to the 802.1x network upon receiving an indication from the signal strength detection circuit.
5. A method for handing off a call from an 802.1x network to a cellular network, the method being performed by a wireless device, the method comprising:
 - measuring the strength of an 802.1x signal received by the wireless device from an access point of the 802.1x network;
 - determining whether the strength of the 802.1x signal has dropped below a certain level;
 - measuring a strength of a cellular signal being received by the wireless device from a cellular network;
 - determining whether the strength of the cellular signal is above a certain level; and

wherein if the 802.1x signal strength is determined to be below a certain level and the cellular signal strength is determined to be above a certain level, initiating a call handoff of the wireless device from the 802.1x network to the cellular network.

6. The method of claim 5, further comprising:

after the handoff has occurred, severing the connection between the wireless device and the access point of the 802.1x network.

7. The method of claim 6, further comprising:

if a determination is made that the strength of the 802.1x signal has dropped below a certain level and that the strength of the cellular signal is above a certain level, the wireless device querying the cellular network for signaling and IP connectivity information; and

communicating the signaling and IP connectivity information from the wireless device to the 802.1x network.

8. A method for initiating a call handoff from a cellular network to an 802.1x network, the method being performed by a wireless device, the method comprising:

measuring the strength of a cellular signal being received by a wireless device from a cellular network;

determining whether the strength of the cellular signal has dropped below a certain level;

measuring a strength of an 802.1x signal being received by the wireless device from an access point of an 802.1x network;

determining whether the strength of the 802.1x signal is above a certain level; and

wherein if the cellular signal strength is determined to be below a certain level and the 802.1x signal strength is determined to be above a certain level, performing a call handoff from the cellular network to the 802.1x network.

9. The method of claim 10, further comprising:

after the handoff has occurred, severing the connection between the wireless device and the cellular network.

10. A computer program for initiating a call handoff from a 802.1x network to a cellular network, the program being embodied on a computer-readable medium, the program comprising:

a first code segment, the first code segment determining whether the strength of an 802.1x signal being received by a wireless device from an access point of an 802.1x network has dropped below a certain level;

a second code segment, the second code segment determining whether the strength of a cellular signal being received by the wireless device from a cellular network is above a certain level; and

a third code segment, if the 802.1x signal strength is determined to be below a certain level and the cellular signal strength is determined to be above a certain level, the third code segment initiating a call handoff from the 802.1x network to the cellular network.

11. A computer program for performing initiating a call handoff from a cellular network to an 802.1x network, the computer program being embodied on a computer-readable medium, the program comprising:

a first code segment, the first code segment determining whether the strength of a cellular signal being received by a wireless device from a cellular network while the wireless device is participating in a call over the cellular network has dropped below a certain level;

a second code segment, the second code segment determining whether the strength of an 802.1x signal being received by the wireless device from an access point of an 802.1x network is above a certain level; and

a third code segment, if the cellular signal strength is determined to be below a certain level and the 802.1x signal strength is determined to be above a certain level, the third code segment initiating a call handoff from the cellular network to the 802.1x network.

12. An 802.1x network comprising:

an access point; and

a server, the server comprising logic configured to determine when a call handoff switch from the 802.1x network to a cellular network is to occur and to communicate with a media gateway to cause the call handoff switch to occur.

13. A cellular network comprising:

call handoff circuitry configured to determine when a call handoff switch from an 802.1x network to the cellular network is to occur and to communicate with a media gateway to cause the call handoff to occur.

14. A server in communication with a media gateway, the server comprising logic configured to determine when a call handoff switch from a cellular network to the 802.1x network is to occur and to communicate with a media gateway that causes the media gateway to make appropriate connections to cause the call handoff switch to occur.

15. The server of claim 14, wherein said logic determines whether or not a signal level of a signal of a signal being transmitted from the 802.1x network to a wireless device exceeds a signal level of a signal being transmitted from the cellular network to the wireless device, said logic determining that a handoff from the 802.1x network to the cellular network should occur when the signal level of the signal being transmitted from the 802.1x network to the wireless device does not exceed the signal level of the signal being transmitted from the cellular network to the wireless device.

16. A cellular network comprising:

logic configured to perform a call handoff switch from the cellular network to the 802.1x network so that a call being carried on the cellular network can be switched from the cellular network to the 802.1x network.

17. A call handoff switching circuit of a media gateway, the switching circuit being in communication with an 802.1x network and with a cellular network, the switching circuit comprising:

first logic configured to determine if a call handoff is to occur from an 802.1x network to a cellular network and to determine if a call handoff is to occur from a cellular network to an 802.1x network; and

second logic configured to switch a call connection from an address associated with the 802.1x network to an address associated with the cellular network when the first logic determines that a call handoff is to occur from the 802.1x network to the cellular network, and configured to switch a call connection from an address associated with the 802.1x network to an address associated with the cellular network when the first logic determines that a call handoff is to occur from the cellular network to the 802.1x network.